

Build Web Application With Golang Gitbook

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Pro Spring Boot 2 - Felipe Gutierrez
2018-12-12

Quickly and productively develop complex Spring applications and microservices out of the box, with minimal concern over things like configurations. This revised book will show you how to fully leverage the Spring Boot 2 technology and how to apply it to create enterprise ready applications that just work. It will also cover what's been added to the new Spring Boot 2 release, including Spring Framework 5 features like WebFlux, Security, Actuator and the new way to expose Metrics through Micrometer framework, and more. This book is your authoritative hands-on practical guide for increasing your enterprise Java and cloud application productivity while decreasing development time. It's a no nonsense guide with case studies of increasing complexity throughout the book. The author, a senior solutions architect and Principal Technical instructor with Pivotal, the company behind the Spring Framework, shares his experience, insights and first-hand knowledge about how Spring Boot technology works and best practices. Pro Spring Boot 2 is an essential book for your Spring learning and reference library. What You Will Learn Configure and use Spring Boot Use non-functional requirements with

Spring Boot Actuator Carry out web development with Spring Boot Persistence with JDBC, JPA and NoSQL Databases Messaging with JMS, RabbitMQ and WebSockets Test and deploy with Spring Boot A quick look at the Spring Cloud projects Microservices and deployment to the Cloud Extend Spring Boot by creating your own Spring Boot Starter and @Enable feature Who This Book Is For Experienced Spring and Java developers seeking increased productivity gains and decreased complexity and development time in their applications and software services.

The Power of JavaScript - Derek Miller
2017-12-15

JavaScript is characterized by enabling interaction, the language was created so that anyone surfing the internet could engage with a website instantaneously without downloading files or refreshing a page. This book looks at the early history of web browsers, traces the evolution of JavaScript, and explains the many applications of the language today, including Adobe Photoshop and online quizzes.

Git in Practice - Mike McQuaid
2014-09-29

Summary Git in Practice is a collection of 66 tested techniques that will optimize the way you and

your team manage your development projects. The book begins with a brief reminder of the core version control concepts you need when using Git and moves on to the high-value features you may not have explored yet. Then, you'll dig into cookbook-style techniques like history visualization, advanced branching and rewriting history each presented in a problem-solution-discussion format. Finally you'll work out how to use Git to its full potential through configuration, team workflows, submodules and using GitHub pull requests effectively. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Git is a source control system, but it's a lot more than just that. For teams working in today's agile, continuous delivery environments, Git is a strategic advantage. Built with a decentralized structure that's perfect for a distributed team, Git manages branching, committing, complex merges, and task switching with minimal ceremony so you can concentrate on your code. About the Book Git in Practice is a collection of battle-tested techniques designed to optimize the way you and your team manage development projects. After a brief overview of Git's core features, this practical guide moves quickly to high-value topics like history visualization, advanced branching and rewriting, optimized configuration, team workflows, submodules, and how to use GitHub pull requests. Written in an easy-to-follow Problem/Solution/Discussion format with numerous diagrams and examples, it skips the theory and gets right to the nitty-gritty tasks that will transform the way you work. Written for developers familiar with version control and ready for the good stuff in Git. What's Inside Team

interaction strategies and techniques Replacing bad habits with good practices Juggling complex configurations Rewriting history and disaster recovery About the Author Mike McQuaid is a software engineer at GitHub. He's contributed to Qt and the Linux kernel, and he maintains the Git-based Homebrew project. Table of Contents PART 1 INTRODUCTION TO GIT Local Git Remote Git PART 2 GIT ESSENTIALS Filesystem interactions History visualization Advanced branching Rewriting history and disaster recovery PART 3 ADVANCED GIT Personalizing Git Vendors dependencies as submodules Working with Subversion GitHub pull requests Hosting a repository PART 4 GIT BEST PRACTICES Creating a clean history Merging vs. rebasing Recommended team workflows

Level Up Your Web Apps With Go - Mal Curtis 2015-04-27

Go is an open-source language from Google that's a bit like C. Designed for programmer productivity, it's got a clean syntax, and emphasizes concurrency. This book gives you all you need to use Go in your web applications. You'll learn the basic concepts - language structures, the standard library, and Go tools - then tackle more advanced features like concurrency concepts, testing methodologies, and package structures. At each step, you'll get advice for better coding in Go. You'll see how to structure projects, how to use concurrency effectively, and best practices for testing - as well as many valuable hints and tips gleaned from real world experience of developing web applications with Go. You'll learn: Get to grips with Go language basics (types, the standard library, tools) Use Go with HTTP Work with images Understand concurrency Test effectively Master deployment And much more ...

Architecting Angular Applications

with Redux, RxJS, and NgRx -

Christoffer Noring 2018-03-26

Managing the state of large-scale web applications is a highly challenging task with the need to align different components, backends, and web workers harmoniously. When it comes to Angular, you can use NgRx, which combines the simplicity of Redux with the reactive programming power of RxJS to build your application architecture, making your ...

Learn Git in a Month of Lunches -

Rick Umali 2015-09-01

Summary Learn Git in a Month of Lunches introduces the discipline of source code control using Git. Whether you're a newbie or a busy pro moving your source control to Git, you'll appreciate how this book concentrates on the components of Git you'll use every day. In easy-to-follow lessons designed to take an hour or less, you'll dig into Git's distributed collaboration model, along with core concepts like committing, branching, and merging. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book Git is the source code control system preferred by modern development teams. Its decentralized architecture and lightning-fast branching let you concentrate on your code instead of tedious version control tasks. At first, Git may seem like a sprawling beast. Fortunately, to get started you just need to master a few essential techniques. Read on! Learn Git in a Month of Lunches introduces the discipline of source code control using Git. Helpful for both newbies who have never used source control and busy pros, this book concentrates on the components of Git you'll use every day. In easy-to-follow lessons that take an hour or less, you'll dig into Git's distributed collaboration model, along with core concepts like

committing, branching, and merging.

This book is a road map to the commands and processes you need to be instantly productive. What's Inside Start from square one—no experience required The most frequently used Git commands Mental models that show how Git works Learn when and how to branch code About the Reader No previous experience with Git or other source control systems is required. About the Author Rick Umali uses Git daily as a developer and is a skilled consultant, trainer, and speaker. Table of Contents Before you begin An overview of Git and version control Getting oriented with Git Making and using a Git repository Using Git with a GUI Tracking and updating files in Git Committing parts of changes The time machine that is Git Taking a fork in the road Merging branches Cloning Collaborating with remotes Pushing your changes Keeping in sync Software archaeology Understanding git rebase Workflows and branching conventions Working with GitHub Third-party tools and Git Sharpening your Git

Go Web Programming - Sau Sheong Chang 2016-07-05

Summary Go Web Programming teaches you how to build scalable, high-performance web applications in Go using modern design principles. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The Go language handles the demands of scalable, high-performance web applications by providing clean and fast compiled code, garbage collection, a simple concurrency model, and a fantastic standard library. It's perfect for writing microservices or building scalable, maintainable systems. About the Book Go Web Programming teaches you how to build web applications in Go using modern design principles. You'll learn how to implement the

dependency injection design pattern for writing test doubles, use concurrency in web applications, and create and consume JSON and XML in web services. Along the way, you'll discover how to minimize your dependence on external frameworks, and you'll pick up valuable productivity techniques for testing and deploying your applications. What's Inside Basics Testing and benchmarking Using concurrency Deploying to standalone servers, PaaS, and Docker Dozens of tips, tricks, and techniques About the Reader This book assumes you're familiar with Go language basics and the general concepts of web development. About the Author Sau Sheong Chang is Managing Director of Digital Technology at Singapore Power and an active contributor to the Ruby and Go communities. Table of Contents PART 1 GO AND WEB APPLICATIONS Go and web applications Go ChatChat PART 2 BASIC WEB APPLICATIONS Handling requests Processing requests Displaying content Storing data PART 3 BEING REAL Go web services Testing your application Leveraging Go concurrency Deploying Go

Version Control with Git - Jon Loeliger 2012-08-14

Get up to speed on Git for tracking, branching, merging, and managing code revisions. Through a series of step-by-step tutorials, this practical guide takes you quickly from Git fundamentals to advanced techniques, and provides friendly yet rigorous advice for navigating the many functions of this open source version control system. This thoroughly revised edition also includes tips for manipulating trees, extended coverage of the reflog and stash, and a complete introduction to the GitHub repository. Git lets you manage code development in a virtually endless variety of ways, once you understand how to harness the system's

flexibility. This book shows you how. Learn how to use Git for several real-world development scenarios Gain insight into Git's common-use cases, initial tasks, and basic functions Use the system for both centralized and distributed version control Learn how to manage merges, conflicts, patches, and diffs Apply advanced techniques such as rebasing, hooks, and ways to handle submodules Interact with Subversion (SVN) repositories—including SVN to Git conversions Navigate, use, and contribute to open source projects through GitHub

Designing Distributed Systems - Brendan Burns 2018-02-20

Without established design patterns to guide them, developers have had to build distributed systems from scratch, and most of these systems are very unique indeed. Today, the increasing use of containers has paved the way for core distributed system patterns and reusable containerized components. This practical guide presents a collection of repeatable, generic patterns to help make the development of reliable distributed systems far more approachable and efficient. Author Brendan Burns—Director of Engineering at Microsoft Azure—demonstrates how you can adapt existing software design patterns for designing and building reliable distributed applications. Systems engineers and application developers will learn how these long-established patterns provide a common language and framework for dramatically increasing the quality of your system. Understand how patterns and reusable components enable the rapid development of reliable distributed systems Use the side-car, adapter, and ambassador patterns to split your application into a group of containers on a single machine Explore loosely coupled multi-node

distributed patterns for replication, scaling, and communication between the components. Learn distributed system patterns for large-scale batch data processing covering work-queues, event-based processing, and coordinated workflows.

Engineering Production-Grade Shiny

Apps - Colin Fay 2021-09-27

From the Reviews "[This book] contains an excellent blend of both Shiny-specific topics ... and practical advice from software development that fits in nicely with Shiny apps. You will find many nuggets of wisdom sprinkled throughout these chapters...." Eric Nantz, Host of the R-Podcast and the Shiny Developer Series (from the Foreword) "[This] book is a gradual and pleasant invitation to the production-ready shiny apps world. It ...exposes a comprehensive and robust workflow powered by the {golem} package. [It] fills the not yet covered gap between shiny app development and deployment in such a thrilling way that it may be read in one sitting.... In the industry world, where processes robustness is a key toward productivity, this book will indubitably have a tremendous impact." David Granjon, Sr. Expert Data Science, Novartis Presented in full color, *Engineering Production-Grade Shiny Apps* helps people build production-grade shiny applications, by providing advice, tools, and a methodology to work on web applications with R. This book starts with an overview of the challenges which arise from any big web application project: organizing work, thinking about the user interface, the challenges of teamwork and the production environment. Then, it moves to a step-by-step methodology that goes from the idea to the end application. Each part of this process will cover in detail a series of tools and methods to use while

building production-ready shiny applications. Finally, the book will end with a series of approaches and advice about optimizations for production. Features Focused on practical matters: This book does not cover Shiny concepts, but practical tools and methodologies to use for production. Based on experience: This book is a formalization of several years of experience building Shiny applications. Original content: This book presents new methodologies and tooling, not just a review of what already exists. *Engineering Production-Grade Shiny Apps* covers medium to advanced content about Shiny, so it will help people that are already familiar with building apps with Shiny, and who want to go one step further.

Black Hat Go - Tom Steele 2020-02-04

Like the best-selling *Black Hat Python*, *Black Hat Go* explores the darker side of the popular Go programming language. This collection of short scripts will help you test your systems, build and automate tools to fit your needs, and improve your offensive security skillset. *Black Hat Go* explores the darker side of Go, the popular programming language revered by hackers for its simplicity, efficiency, and reliability. It provides an arsenal of practical tactics from the perspective of security practitioners and hackers to help you test your systems, build and automate tools to fit your needs, and improve your offensive security skillset, all using the power of Go. You'll begin your journey with a basic overview of Go's syntax and philosophy and then start to explore examples that you can leverage for tool development, including common network protocols like HTTP, DNS, and SMB. You'll then dig into various tactics and problems that penetration testers encounter, addressing things like data

pilfering, packet sniffing, and exploit development. You'll create dynamic, pluggable tools before diving into cryptography, attacking Microsoft Windows, and implementing steganography. You'll learn how to:

- Make performant tools that can be used for your own security projects
- Create usable tools that interact with remote APIs
- Scrape arbitrary HTML data
- Use Go's standard package, net/http, for building HTTP servers
- Write your own DNS server and proxy
- Use DNS tunneling to establish a C2 channel out of a restrictive network
- Create a vulnerability fuzzer to discover an application's security weaknesses
- Use plug-ins and extensions to future-proof products

Build an RC2 symmetric-key brute-forcer

- Implant data within a Portable Network Graphics (PNG) image. Are you ready to add to your arsenal of security tools? Then let's Go!

RESTful Web APIs - Leonard Richardson
2013-09-12

The popularity of REST in recent years has led to tremendous growth in almost-RESTful APIs that don't include many of the architecture's benefits. With this practical guide, you'll learn what it takes to design usable REST APIs that evolve over time. By focusing on solutions that cross a variety of domains, this book shows you how to create powerful and secure applications, using the tools designed for the world's most successful distributed computing system: the World Wide Web. You'll explore the concepts behind REST, learn different strategies for creating hypermedia-based APIs, and then put everything together with a step-by-step guide to designing a RESTful Web API. Examine API design strategies, including the collection pattern and pure hypermedia. Understand how hypermedia ties representations together into a

coherent API. Discover how XMDP and ALPS profile formats can help you meet the Web API "semantic challenge". Learn close to two-dozen standardized hypermedia data formats. Apply best practices for using HTTP in API implementations. Create Web APIs with the JSON-LD standard and other the Linked Data approaches. Understand the CoAP protocol for using REST in embedded systems.

Learn TypeScript 3 by Building Web Applications - Sebastien Dubois
2019-11-22

Learn TypeScript and many of its features by building state of art web applications from scratch with the help of modern tooling, frameworks, and libraries. Key Features: Create modern Web applications to help businesses around the world benefit from better quality applications. Learn the latest features of TypeScript 3 and use them wisely. Explore TDD practices, OOP techniques, and industry best practices to create high-quality and modular apps. Book Description: TypeScript is a superset of the JavaScript programming language, giving developers a tool to help them write faster, cleaner JavaScript. With the help of its powerful static type system and other powerful tools and techniques it allows developers to write modern JavaScript applications. This book is a practical guide to learn the TypeScript programming language. It covers from the very basics to the more advanced concepts, while explaining many design patterns, techniques, frameworks, libraries and tools along the way. You will also learn a ton about modern web frameworks like Angular, Vue.js and React, and you will build cool web applications using those. This book also covers modern front-end development tooling such as Node.js, npm, yarn, Webpack, Parcel, Jest, and

many others. Throughout the book, you will also discover and make use of the most recent additions of the language introduced by TypeScript 3 such as new types enforcing explicit checks, flexible and scalable ways of project structuring, and many more breaking changes. By the end of this book, you will be ready to use TypeScript in your own projects and will also have a concrete view of the current frontend software development landscape. What you will learn

- Understand and take advantage of TypeScript's powerful Type System
- Grasp the key concepts and features of Angular, React, Vue.js, and NestJS
- Handle asynchronous processes using Promises, async/await, Fetch, RxJS, and more
- Delve into REST, GraphQL and create APIs using Apollo
- Discover testing concepts, techniques, and tools like TDD, BDD, E2E, Jest
- Learn Object-Oriented and Functional Programming concepts and leverage those with TypeScript
- Explore design practices and patterns such as SOLID, MVC, DI and IoC, LoD, AOP, and more

Who this book is for This book is for software developers who are willing to discover what TypeScript is and how to leverage it to write great quality software. Developers that are already familiar with TypeScript will find this book useful by learning the languages featured introduced by most recent releases. Basic knowledge of the JavaScript programming is expected.

Mastering CloudForms Automation - Peter McGowan 2016-08-22

Learn how to work with the Automate feature of CloudForms, the powerful Red Hat cloud management platform that lets you administer your virtual infrastructure, including hybrid public and private clouds. This practical hands-on introduction shows you how to increase your operational efficiency by automating day-to-day tasks that now require manual input.

Throughout the book, author Peter McGowan provides a combination of theoretical information and practical coding examples to help you learn the Automate object model. With this CloudForms feature, you can create auto-scalable cloud applications, eliminate manual decisions and operations when provisioning virtual machines and cloud instances, and manage your complete virtual machine lifecycle. In six parts, this book helps you: Learn the objects and concepts for developing automation scripts with CloudForms Automate

- Customize the steps and workflows involved in provisioning virtual machines
- Create and use service catalogs, items, dialogs, objects, bundles, and hierarchies
- Use CloudForm's updated workflow to retire and delete virtual machines and services
- Orchestrate and coordinate with external services as part of a workflow
- Explore distributed automation processing as well as argument passing and handling

Go in Action - Erik St. Martin 2015-11-04

Summary Go in Action introduces the Go language, guiding you from inquisitive developer to Go guru. The book begins by introducing the unique features and concepts of Go. Then, you'll get hands-on experience writing real-world applications including websites and network servers, as well as techniques to manipulate and convert data at speeds that will make your friends jealous. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Application development can be tricky enough even when you aren't dealing with complex systems programming problems like web-scale concurrency and real-time performance. While it's possible to solve these common issues with additional tools and frameworks, Go

handles them right out of the box, making for a more natural and productive coding experience. Developed at Google, Go powers nimble startups as well as big enterprises—companies that rely on high-performing services in their infrastructure. About the Book Go in Action is for any intermediate-level developer who has experience with other programming languages and wants a jump-start in learning Go or a more thorough understanding of the language and its internals. This book provides an intensive, comprehensive, and idiomatic view of Go. It focuses on the specification and implementation of the language, including topics like language syntax, Go's type system, concurrency, channels, and testing. What's Inside Language specification and implementation Go's type system Internals of Go's data structures Testing and benchmarking About the Reader This book assumes you're a working developer proficient with another language like Java, Ruby, Python, C#, or C++. About the Authors William Kennedy is a seasoned software developer and author of the blog GoingGo.Net. Brian Ketelsen and Erik St. Martin are the organizers of GopherCon and coauthors of the Go-based Skynet framework. Table of Contents Introducing Go Go quick-start Packaging and tooling Arrays, slices, and maps Go's type system Concurrency Concurrency patterns Standard library Testing and benchmarking

The Rust Programming Language (Covers Rust 2018) - Steve Klabnik 2019-09-03 The official book on the Rust programming language, written by the Rust development team at the Mozilla Foundation, fully updated for Rust 2018. The Rust Programming Language is the official book on Rust: an open source systems programming language that helps you write faster, more

reliable software. Rust offers control over low-level details (such as memory usage) in combination with high-level ergonomics, eliminating the hassle traditionally associated with low-level languages. The authors of The Rust Programming Language, members of the Rust Core Team, share their knowledge and experience to show you how to take full advantage of Rust's features--from installation to creating robust and scalable programs. You'll begin with basics like creating functions, choosing data types, and binding variables and then move on to more advanced concepts, such as:

- Ownership and borrowing, lifetimes, and traits
- Using Rust's memory safety guarantees to build fast, safe programs
- Testing, error handling, and effective refactoring
- Generics, smart pointers, multithreading, trait objects, and advanced pattern matching
- Using Cargo, Rust's built-in package manager, to build, test, and document your code and manage dependencies
- How best to use Rust's advanced compiler with compiler-led programming techniques

You'll find plenty of code examples throughout the book, as well as three chapters dedicated to building complete projects to test your learning: a number guessing game, a Rust implementation of a command line tool, and a multithreaded server. New to this edition: An extended section on Rust macros, an expanded chapter on modules, and appendixes on Rust development tools and editions.

Get Programming with Go - Roger Peppe 2018-08-27 Summary Get Programming with Go introduces you to the powerful Go language without confusing jargon or high-level theory. By working through 32 quick-fire lessons, you'll quickly pick up the basics of the innovative Go programming language! Purchase of the print book includes a free eBook

in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Go is a small programming language designed by Google to tackle big problems. Large projects mean large teams with people of varying levels of experience. Go offers a small, yet capable, language that can be understood and used by anyone, no matter their experience. About the Book Hobbyists, newcomers, and professionals alike can benefit from a fast, modern language; all you need is the right resource! Get Programming with Go provides a hands-on introduction to Go language fundamentals, serving as a solid foundation for your future programming projects. You'll master Go syntax, work with types and functions, and explore bigger ideas like state and concurrency, with plenty of exercises to lock in what you learn. What's inside Language concepts like slices, interfaces, pointers, and concurrency Seven capstone projects featuring spacefaring gophers, Mars rovers, ciphers, and simulations All examples run in the Go Playground - no installation required! About the Reader This book is for anyone familiar with computer programming, as well as anyone with the desire to learn. About the Author Nathan Youngman organizes the Edmonton Go meetup and is a mentor with Canada Learning Code. Roger Peppé contributes to Go and runs the Newcastle upon Tyne Go meetup. Table of Contents Unit 0 - GETTING STARTED Get ready, get set, Go Unit 1 - IMPERATIVE PROGRAMMING A glorified calculator Loops and branches Variable scope Capstone: Ticket to Mars Unit 2 - TYPES Real numbers Whole numbers Big numbers Multilingual text Converting between types Capstone: The Vigenère cipher Unit 3 - BUILDING BLOCKS Functions Methods First-class functions

Capstone: Temperature tables Unit 4 - COLLECTIONS Arrayed in splendor Slices: Windows into arrays A bigger slice The ever-versatile map Capstone: A slice of life Unit 5 - STATE AND BEHAVIOR A little structure Go's got no class Composition and forwarding Interfaces Capstone: Martian animal sanctuary Unit 6 - DOWN THE GOPHER HOLE A few pointers Much ado about nil To err is human Capstone: Sudoku rules Unit 7 - CONCURRENT PROGRAMMING Goroutines and concurrency Concurrent state Capstone: Life on Mars

Ruby on Rails Tutorial - Michael Hartl 2016-11-17

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Used by sites as varied as Twitter, GitHub, Disney, and Airbnb, Ruby on Rails is one of the most popular frameworks for developing web applications, but it can be challenging to learn and use. Whether you're new to web development or new only to Rails, Ruby on Rails™ Tutorial, Fourth Edition, is the solution. Best-selling author and leading Rails developer Michael Hartl teaches Rails by guiding you through the development of three example applications of increasing sophistication. The tutorial's examples focus on the general principles of web development needed for virtually any kind of website. The updates to this edition include full compatibility with Rails 5, a division of the largest chapters into more manageable units, and a huge number of new exercises interspersed in each chapter for maximum reinforcement of the material. This indispensable guide provides integrated tutorials not only for Rails, but also for the essential Ruby, HTML, CSS, and SQL skills you need when developing web

applications. Hartl explains how each new technique solves a real-world problem, and then he demonstrates it with bite-sized code that's simple enough to understand, yet novel enough to be useful. Whatever your previous web development experience, this book will guide you to true Rails mastery. This book will help you Install and set up your Rails development environment, including pre-installed integrated development environment (IDE) in the cloud Go beyond generated code to truly understand how to build Rails applications from scratch Learn testing and test-driven development (TDD) Effectively use the Model-View-Controller (MVC) pattern Structure applications using the REST architecture Build static pages and transform them into dynamic ones Master the Ruby programming skills all Rails developers need Create high-quality site layouts and data models Implement registration and authentication systems, including validation and secure passwords Update, display, and delete users Upload images in production using a cloud storage service Implement account activation and password reset, including sending email with Rails Add social features and microblogging, including an introduction to Ajax Record version changes with Git and create a secure remote repository at Bitbucket Deploy your applications early and often with Heroku

Mathematics for Machine Learning - Marc Peter Deisenroth 2020-04-23
The fundamental mathematical tools needed to understand machine learning include linear algebra, analytic geometry, matrix decompositions, vector calculus, optimization, probability and statistics. These topics are traditionally taught in disparate courses, making it hard for data science or computer science

students, or professionals, to efficiently learn the mathematics. This self-contained textbook bridges the gap between mathematical and machine learning texts, introducing the mathematical concepts with a minimum of prerequisites. It uses these concepts to derive four central machine learning methods: linear regression, principal component analysis, Gaussian mixture models and support vector machines. For students and others with a mathematical background, these derivations provide a starting point to machine learning texts. For those learning the mathematics for the first time, the methods help build intuition and practical experience with applying mathematical concepts. Every chapter includes worked examples and exercises to test understanding. Programming tutorials are offered on the book's web site.

Architecture Patterns with Python - Harry Percival 2020-03-05
As Python continues to grow in popularity, projects are becoming larger and more complex. Many Python developers are now taking an interest in high-level software design patterns such as hexagonal/clean architecture, event-driven architecture, and the strategic patterns prescribed by domain-driven design (DDD). But translating those patterns into Python isn't always straightforward. With this hands-on guide, Harry Percival and Bob Gregory from MADE.com introduce proven architectural design patterns to help Python developers manage application complexity—and get the most value out of their test suites. Each pattern is illustrated with concrete examples in beautiful, idiomatic Python, avoiding some of the verbosity of Java and C# syntax. Patterns include: Dependency inversion and its links to ports and adapters (hexagonal/clean architecture) Domain-driven design's

distinction between entities, value objects, and aggregates Repository and Unit of Work patterns for persistent storage Events, commands, and the message bus Command-query responsibility segregation (CQRS) Event-driven architecture and reactive microservices

R Markdown - Yihui Xie 2018-07-27

R Markdown: The Definitive Guide is the first official book authored by the core R Markdown developers that provides a comprehensive and accurate reference to the R Markdown ecosystem. With R Markdown, you can easily create reproducible data analysis reports, presentations, dashboards, interactive applications, books, dissertations, websites, and journal articles, while enjoying the simplicity of Markdown and the great power of R and other languages. In this book, you will learn Basics: Syntax of Markdown and R code chunks, how to generate figures and tables, and how to use other computing languages Built-in output formats of R Markdown:

PDF/HTML/Word/RTF/Markdown documents and ioslides/Slidy/Beamer/PowerPoint presentations Extensions and applications: Dashboards, Tufte handouts, xaringan/reveal.js presentations, websites, books, journal articles, and interactive tutorials Advanced topics:

Parameterized reports, HTML widgets, document templates, custom output formats, and Shiny documents. Yihui Xie is a software engineer at RStudio. He has authored and co-authored several R packages, including knitr, rmarkdown, bookdown, blogdown, shiny, xaringan, and animation. He has published three other books, *Dynamic Documents with R* and *knitr*, *bookdown: Authoring Books and Technical Documents with R Markdown*, and *blogdown: Creating Websites with R Markdown*. J.J. Allaire is the founder of RStudio and

the creator of the RStudio IDE. He is an author of several packages in the R Markdown ecosystem including rmarkdown, flexdashboard, learnr, and radix. Garrett Golemund is the co-author of *R for Data Science* and author of *Hands-On Programming with R*. He wrote the lubridate R package and works for RStudio as an advocate who trains engineers to do data science with R and the Tidyverse.

Network Programming with Go - Jan Newmarch 2017-05-15

Dive into key topics in network architecture and Go, such as data serialization, application level protocols, character sets and encodings. This book covers network architecture and gives an overview of the Go language as a primer, covering the latest Go release. Beyond the fundamentals, *Network Programming with Go* covers key networking and security issues such as HTTP and HTTPS, templates, remote procedure call (RPC), web sockets including HTML5 web sockets, and more.

Additionally, author Jan Newmarch guides you in building and connecting to a complete web server based on Go. This book can serve as both as an essential learning guide and reference on Go networking. What You Will Learn Master network programming with Go Carry out data serialization Use application-level protocols Manage character sets and encodings Deal with HTTP(S) Build a complete Go-based web server Work with RPC, web sockets, and more Who This Book Is For Experienced Go programmers and other programmers with some experience with the Go language.

Head First Go - Jay McGavren 2019-04-04

What will you learn from this book? Go makes it easy to build software that's simple, reliable, and efficient. And this book makes it easy for programmers like you to get started. Google designed Go for high-

performance networking and multiprocessing, but—like Python and JavaScript—the language is easy to read and use. With this practical hands-on guide, you'll learn how to write Go code using clear examples that demonstrate the language in action. Best of all, you'll understand the conventions and techniques that employers want entry-level Go developers to know. Why does this book look so different? Based on the latest research in cognitive science and learning theory, *HeadFirst Go* uses a visually rich format to engage your mind rather than a text-heavy approach that puts you to sleep. Why waste your time struggling with new concepts? This multisensory learning experience is designed for the way your brain really works.

Concurrency in Go - Katherine Cox-Buday 2017-07-19

Concurrency can be notoriously difficult to get right, but fortunately, the Go open source programming language makes working with concurrency tractable and even easy. If you're a developer familiar with Go, this practical book demonstrates best practices and patterns to help you incorporate concurrency into your systems. Author Katherine Cox-Buday takes you step-by-step through the process. You'll understand how Go chooses to model concurrency, what issues arise from this model, and how you can compose primitives within this model to solve problems. Learn the skills and tooling you need to confidently write and implement concurrent systems of any size. Understand how Go addresses fundamental problems that make concurrency difficult to do correctly. Learn the key differences between concurrency and parallelism. Dig into the syntax of Go's memory synchronization primitives. Form patterns with these primitives to

write maintainable concurrent code. Compose patterns into a series of practices that enable you to write large, distributed systems that scale. Learn the sophistication behind goroutines and how Go's runtime stitches everything together.
The Markdown Guide - Matt Cone 2020-06-27

The Markdown markup language is one of the most popular plain-text formatting languages available. Now you can learn the Markdown syntax with the book that's been called "the best Markdown reference." Designed for both novices and experts, *The Markdown Guide* is a comprehensive reference manual that has everything you need to get started and master the Markdown syntax.

Learning Go - Jon Bodner 2021-03-02
Go is rapidly becoming the preferred language for building web services. While there are plenty of tutorials available that teach Go's syntax to developers with experience in other programming languages, tutorials aren't enough. They don't teach Go's idioms, so developers end up recreating patterns that don't make sense in a Go context. This practical guide provides the essential background you need to write clear and idiomatic Go. No matter your level of experience, you'll learn how to think like a Go developer. Author Jon Bodner introduces the design patterns experienced Go developers have adopted and explores the rationale for using them. You'll also get a preview of Go's upcoming generics support and how it fits into the language. Learn how to write idiomatic code in Go and design a Go project. Understand the reasons for the design decisions in Go. Set up a Go development environment for a solo developer or team. Learn how and when to use reflection, unsafe, and cgo. Discover how Go's features allow the language to run efficiently. Know

which Go features you should use sparingly or not at all

Lessons in the Fundamentals of Go - Toshirō Kageyama 1998-09-01

R for Data Science - Hadley Wickham 2016-12-12

Learn how to use R to turn raw data into insight, knowledge, and understanding. This book introduces you to R, RStudio, and the tidyverse, a collection of R packages designed to work together to make data science fast, fluent, and fun. Suitable for readers with no previous programming experience, *R for Data Science* is designed to get you doing data science as quickly as possible.

Authors Hadley Wickham and Garrett Grolemund guide you through the steps of importing, wrangling, exploring, and modeling your data and communicating the results. You'll get a complete, big-picture understanding of the data science cycle, along with basic tools you need to manage the details. Each section of the book is paired with exercises to help you practice what you've learned along the way. You'll learn how to:

Wrangle—transform your datasets into a form convenient for analysis
Program—learn powerful R tools for solving data problems with greater clarity and ease
Explore—examine your data, generate hypotheses, and quickly test them
Model—provide a low-dimensional summary that captures true "signals" in your dataset
Communicate—learn R Markdown for integrating prose, code, and results

[Pro Git](#) - Scott Chacon 2009-10-06

Git is the version control system developed by Linus Torvalds for Linux kernel development. It took the open source world by storm since its inception in 2005, and is used by small development shops and giants like Google, Red Hat, and IBM, and of course many open source projects. A book by Git experts to turn you into

a Git expert
Introduces the world of distributed version control
Shows how to build a Git development workflow
Building Microservices with Go - Nic Jackson 2017-07-27

Your one-stop guide to the common patterns and practices, showing you how to apply these using the Go programming language
About This Book
This short, concise, and practical guide is packed with real-world examples of building microservices with Go
It is easy to read and will benefit smaller teams who want to extend the functionality of their existing systems
Using this practical approach will save your money in terms of maintaining a monolithic architecture and demonstrate capabilities in ease of use
Who This Book Is For
You should have a working knowledge of programming in Go, including writing and compiling basic applications. However, no knowledge of RESTful architecture, microservices, or web services is expected. If you are looking to apply techniques to your own projects, taking your first steps into microservice architecture, this book is for you.
What You Will Learn
Plan a microservice architecture and design a microservice
Write a microservice with a RESTful API and a database
Understand the common idioms and common patterns in microservices architecture
Leverage tools and automation that helps microservices become horizontally scalable
Get a grounding in containerization with Docker and Docker-Compose, which will greatly accelerate your development lifecycle
Manage and secure Microservices at scale with monitoring, logging, service discovery, and automation
Test microservices and integrate API tests in Go
In Detail
Microservice architecture is sweeping the world as the de facto pattern to build web-based applications. Golang is a

language particularly well suited to building them. Its strong community, encouragement of idiomatic style, and statically-linked binary artifacts make integrating it with other technologies and managing microservices at scale consistent and intuitive. This book will teach you the common patterns and practices, showing you how to apply these using the Go programming language. It will teach you the fundamental concepts of architectural design and RESTful communication, and show you patterns that provide manageable code that is supportable in development and at scale in production. We will provide you with examples on how to put these concepts and patterns into practice with Go. Whether you are planning a new application or working in an existing monolith, this book will explain and illustrate with practical examples how teams of all sizes can start solving problems with microservices. It will help you understand Docker and Docker-Compose and how it can be used to isolate microservice dependencies and build environments. We finish off by showing you various techniques to monitor, test, and secure your microservices. By the end, you will know the benefits of system resilience of a microservice and the advantages of Go stack. Style and approach The step-by-step tutorial focuses on building microservices. Each chapter expands upon the previous one, teaching you the main skills and techniques required to be a successful microservice practitioner.

Web Application Development with R Using Shiny - Chris Beeley 2018-09-27 Analyze, communicate, and design your own sophisticated and interactive web applications using the R (v 3.4) Shiny (1.1.0) package Key Features Explore the power of R Shiny to make interactive web applications easily

Create engaging user interfaces using elements such as HTML5 shiny tags and Ttabsets Build and deploy your interactive Shiny web application using shinyapps.io Book Description Web Application Development with R Using Shiny helps you become familiar with the complete R Shiny package. The book starts with a quick overview of R and its fundamentals, followed by an exploration of the fundamentals of Shiny and some of the things that it can help you do. You'll learn about the wide range of widgets and functions within Shiny and how they fit together to make an attractive and easy to use application. Once you have understood the basics, you'll move on to studying more advanced UI features, including how to style apps in detail using the Bootstrap framework or and Shiny's inbuilt layout functions. You'll learn about enhancing Shiny with JavaScript, ranging from adding simple interactivity with JavaScript right through to using JavaScript to enhance the reactivity between your app and the UI. You'll learn more advanced Shiny features of Shiny, such as uploading and downloading data and reports, as well as how to interact with tables and link reactive outputs. Lastly, you'll learn how to deploy Shiny applications over the internet, as well as and how to handle storage and data persistence within Shiny applications, including the use of relational databases. By the end of this book, you'll be ready to create responsive, interactive web applications using the complete R (v 3.4) Shiny (1.1.0) suite. What you will learn Harness the power of JavaScript to customize your applications Build dashboards with predefined UI and layouts Engage your users and build better analytics using interactive plots Learn advanced code patterns to make your

applications easy to write and maintain. Develop a full understanding of Shiny's UI functions to give you the power to build a wide variety of attractive applications. Store data and interact with databases with Shiny. Learn how to share your Shiny applications. Understand reactivity at the conceptual level to build more efficient and robust apps. Who this book is for: Web Application Development with R. Using Shiny is for you if you are interested in creating compelling web applications and interactive data visualization over the web using Shiny. Programming experience with R is required.

bookdown - Yihui Xie 2016-12-12
bookdown: Authoring Books and Technical Documents with R. Markdown presents a much easier way to write books and technical publications than traditional tools such as LaTeX and Word. The bookdown package inherits the simplicity of syntax and flexibility for data analysis from R Markdown, and extends R Markdown for technical writing, so that you can make better use of document elements such as figures, tables, equations, theorems, citations, and references. Similar to LaTeX, you can number and cross-reference these elements with bookdown. Your document can even include live examples so readers can interact with them while reading the book. The book can be rendered to multiple output formats, including LaTeX/PDF, HTML, EPUB, and Word, thus making it easy to put your documents online. The style and theme of these output formats can be customized. We used books and R primarily for examples in this book, but bookdown is not only for books or R. Most features introduced in this book also apply to other types of publications: journal papers, reports, dissertations, course handouts, study notes, and even novels. You do not

have to use R, either. Other choices of computing languages include Python, C, C++, SQL, Bash, Stan, JavaScript, and so on, although R is best supported. You can also leave out computing, for example, to write a fiction. This book itself is an example of publishing with bookdown and R Markdown, and its source is fully available on GitHub.

Designing Data-Intensive Applications

- Martin Kleppmann 2017-03-16
Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively. Make informed decisions by identifying the strengths and weaknesses of different tools. Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity. Understand the distributed systems research upon which modern databases are built. Peek behind the scenes of major online services, and learn from their architectures.

The Go Programming Language - Alan A. Donovan 2015-11-16

The Go Programming Language is the authoritative resource for any programmer who wants to learn Go. It shows how to write clear and idiomatic Go to solve real-world problems. The book does not assume prior knowledge of Go nor experience with any specific language, so you'll find it accessible whether you're most comfortable with JavaScript, Ruby, Python, Java, or C++. The first chapter is a tutorial on the basic concepts of Go, introduced through programs for file I/O and text processing, simple graphics, and web clients and servers. Early chapters cover the structural elements of Go programs: syntax, control flow, data types, and the organization of a program into packages, files, and functions. The examples illustrate many packages from the standard library and show how to create new ones of your own. Later chapters explain the package mechanism in more detail, and how to build, test, and maintain projects using the go tool. The chapters on methods and interfaces introduce Go's unconventional approach to object-oriented programming, in which methods can be declared on any type and interfaces are implicitly satisfied. They explain the key principles of encapsulation, composition, and substitutability using realistic examples. Two chapters on concurrency present in-depth approaches to this increasingly important topic. The first, which covers the basic mechanisms of goroutines and channels, illustrates the style known as communicating sequential processes for which Go is renowned. The second covers more traditional aspects of concurrency with shared variables. These chapters provide a solid foundation for programmers encountering concurrency

for the first time. The final two chapters explore lower-level features of Go. One covers the art of metaprogramming using reflection. The other shows how to use the unsafe package to step outside the type system for special situations, and how to use the cgo tool to create Go bindings for C libraries. The book features hundreds of interesting and practical examples of well-written Go code that cover the whole language, its most important packages, and a wide range of applications. Each chapter has exercises to test your understanding and explore extensions and alternatives. Source code is freely available for download from <http://gopl.io/> and may be conveniently fetched, built, and installed using the go get command.

Real World OCaml - Yaron Minsky 2013-11-04

This fast-moving tutorial introduces you to OCaml, an industrial-strength programming language designed for expressiveness, safety, and speed. Through the book's many examples, you'll quickly learn how OCaml stands out as a tool for writing fast, succinct, and readable systems code. Real World OCaml takes you through the concepts of the language at a brisk pace, and then helps you explore the tools and techniques that make OCaml an effective and practical tool. In the book's third section, you'll delve deep into the details of the compiler toolchain and OCaml's simple and efficient runtime system. Learn the foundations of the language, such as higher-order functions, algebraic data types, and modules Explore advanced features such as functors, first-class modules, and objects Leverage Core, a comprehensive general-purpose standard library for OCaml Design effective and reusable libraries, making the most of OCaml's approach to abstraction and modularity Tackle

practical programming problems from command-line parsing to asynchronous network programming Examine profiling and interactive debugging techniques with tools such as GNU gdb

Mastering Shiny - Hadley Wickham
2021-04-29

Master the Shiny web framework—and take your R skills to a whole new level. By letting you move beyond static reports, Shiny helps you create fully interactive web apps for data analyses. Users will be able to jump between datasets, explore different subsets or facets of the data, run models with parameter values of their choosing, customize visualizations, and much more. Hadley Wickham from RStudio shows data scientists, data analysts, statisticians, and scientific researchers with no knowledge of HTML, CSS, or JavaScript how to create rich web apps from R. This in-depth guide provides a learning path that you can follow with confidence, as you go from a Shiny beginner to an expert developer who can write large, complex apps that are maintainable and performant. Get started: Discover how the major pieces of a Shiny app fit together Put Shiny in action: Explore Shiny functionality with a focus on code samples, example apps, and useful techniques Master reactivity: Go deep into the theory and practice of reactive programming and examine reactive graph components Apply best practices: Examine useful techniques for making your Shiny apps work well in production

Cloud Native Programming with Golang
- Mina Andrawos 2017-12-28

Discover practical techniques to build cloud-native apps that are scalable, reliable, and always available. Key Features Build well-designed and secure microservices. Enrich your microservices with continuous integration and monitoring. Containerize your application with

Docker Deploy your application to AWS. Learn how to utilize the powerful AWS services from within your application Book Description Awarded as one of the best books of all time by BookAuthority, Cloud Native Programming with Golang will take you on a journey into the world of microservices and cloud computing with the help of Go. Cloud computing and microservices are two very important concepts in modern software architecture. They represent key skills that ambitious software engineers need to acquire in order to design and build software applications capable of performing and scaling. Go is a modern cross-platform programming language that is very powerful yet simple; it is an excellent choice for microservices and cloud applications. Go is gaining more and more popularity, and becoming a very attractive skill. This book starts by covering the software architectural patterns of cloud applications, as well as practical concepts regarding how to scale, distribute, and deploy those applications. You will also learn how to build a JavaScript-based front-end for your application, using TypeScript and React. From there, we dive into commercial cloud offerings by covering AWS. Finally, we conclude our book by providing some overviews of other concepts and technologies that you can explore, to move from where the book leaves off. What you will learn Understand modern software applications architectures Build secure microservices that can effectively communicate with other services Get to know about event-driven architectures by diving into message queues such as Kafka, Rabbitmq, and AWS SQS. Understand key modern database technologies such as MongoDB, and Amazon's DynamoDB Leverage the power of containers Explore Amazon cloud services

fundamentals Know how to utilize the power of the Go language to access key services in the Amazon cloud such as S3, SQS, DynamoDB and more. Build front-end applications using ReactJS with Go Implement CD for modern applications Who this book is for This book is for developers who want to begin building secure, resilient, robust, and scalable Go applications that are cloud native. Some knowledge of the Go programming language should be sufficient. To build the front-end application, you will also need some knowledge of JavaScript programming.

Mining the Social Web - Matthew Russell 2011-01-21

Provides information on data analysis from a variety of social networking sites, including Facebook, Twitter, and LinkedIn.

Pro Git - Scott Chacon 2014-11-18

Pro Git (Second Edition) is your fully-updated guide to Git and its usage in the modern world. Git has come a long way since it was first developed by Linus Torvalds for Linux kernel development. It has taken the open source world by storm since its inception in 2005, and this book teaches you how to use it like a pro. Effective and well-implemented version control is a necessity for successful web projects, whether large or small. With this book you'll learn how to master the world of distributed version workflow, use the distributed features of Git to the full, and extend Git to meet your every need. Written by Git pros Scott Chacon and Ben Straub, Pro Git (Second Edition) builds on the hugely successful first edition, and is now fully updated for Git version 2.0, as well as including an indispensable chapter on GitHub. It's the best book for all your Git needs.

Learning Vue.js 2 - Olga Filipova 2016-12-13

Learn how to build amazing and complex reactive web applications

easily with Vue.js About This Book Learn how to propagate DOM changes across the website without writing extensive jQuery callbacks code. Learn how to achieve reactivity and easily compose views with Vue.js and understand what it does behind the scenes. Explore the core features of Vue.js with small examples, learn how to build dynamic content into preexisting web applications, and build Vue.js applications from scratch. Who This Book Is For This book is perfect for novice web developer seeking to learn new technologies or frameworks and also for webdev gurus eager to enrich their experience. Whatever your level of expertise, this book is a great introduction to the wonderful world of reactive web apps. What You Will Learn Build a fully functioning reactive web application in Vue.js from scratch. The importance of the MVVM architecture and how Vue.js compares with other frameworks such as Angular.js and React.js. How to bring reactivity to an existing static application using Vue.js. How to use plugins to enrich your applications. How to develop customized plugins to meet your needs. How to use Vuex to manage global application's state. In Detail Vue.js is one of the latest new frameworks to have piqued the interest of web developers due to its reactivity, reusable components, and ease of use. This book shows developers how to leverage its features to build high-performing, reactive web interfaces with Vue.js. From the initial structuring to full deployment, this book provides step-by-step guidance to developing an interactive web interface from scratch with Vue.js. You will start by building a simple application in Vue.js which will let you observe its features in action. Delving into more complex concepts, you will learn

about reactive data binding, reusable components, plugins, filters, and state management with Vuex. This book will also teach you how to bring reactivity to an existing static application using Vue.js. By the time you finish this book you will have built, tested, and deployed a complete reactive application in

Vue.js from scratch. Style and approach This book is a thorough, step-by-step guide showing readers how to build complete web apps with Vue.js. While teaching its intricacies, this book shows how to implement the MVVM architecture in the real world and build high-performing web interfaces.